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York University Building Standards

*Note to the Designer/Architect/Engineer: These standards are basic minimum criteria to be met in preparing the final project specifications for this section, which is the responsibility of the Designer*

**1.0 GENERAL**

- 1.1 Conditions
- 1.2 Guideline Principles and Design Requirements
- 1.3 Scope of Work
- 1.4 Related York University Standards
- 1.5 References and Performance Standards
- 1.6 Submittals
- 1.7 Maintenance
- 1.8 Quality Assurance
- 1.9 Standard Warranties and Extended Warranties (S.W. / E.W.)

**2.0 PRODUCTS**

- 2.1 Foot Grille, Frame, Pan and Drain

**3.0 EXECUTION**

- 3.1 Coordination
- 3.2 Installation

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## 1.0 GENERAL

### 1.1 Conditions

- .1 This section defines relevant York University standards related to Entrance Vestibule Foot Grilles

### 1.2 Guideline Principles and Design Requirements

- .1 Foot grilles shall be installed at each academic and administrative building entrance vestibule
- .2 Foot Grilles shall cover the total width of the door's opening as well as the length of the vestibule
- .3 Foot Grilles shall incorporate drainage and must be designed and planned so that proper drainage is taken into consideration
- .4 Foot grilles shall be designed and installed so that the long term operational needs for maintenance are taken into consideration

### 1.3 Scope of Work

- .1 This Section covers entrance vestibule foot grilles, frames, pans and related hardware

### 1.4 Related York University Standards

**Likely plumbing standard once these are developed**

- .1 Carpet Section 09 68 00
- .2 Resilient Flooring Section 09 65 00

### 1.5 References and Performance Standards

- .1 Comply with all applicable municipal, provincial, federal and trade standards in this specification, unless more stringent requirements are given herein
- .2 Draft Initial Proposed Accessible Built Environment Standard (January 2009)
- .3 ASTM B117 – 2011 Standard Practice for Operating Salt Spray (fog) Apparatus
- .4 ASTM B 209 – 2010 Standard Specification for Aluminum and Aluminum Sheet and Plate

- .5 ASTM B221 – 2012 Standard Specification for Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Profiles and Tubes
- 1.6 Submittals
  - .1 Submit to York University Project Representative Product Data Sheets (also known as Technical Data Sheets). Including construction details, material descriptions, dimensions of individual components and profiles, and finishes for foot grilles and frames
  - .2 Shop Drawings – submit shop drawings showing the following:
    - .1 items penetrating foot grilles and frames, including door control devices
    - .2 divisions between grille and sections
    - .3 perimeter floor moldings
  - .3 Samples for initial selection – provide sample of colour and grille material selection
  - .4 Samples for Verification
    - .1 provide foot grille 305 mm square (12 inch square) assembled sections
    - .2 provide frame member sample in 305 mm (12 inch) long in each colour
- 1.7 Maintenance
  - .1 Maintenance Data
    - .1 provide maintenance manual for foot grille and frame
    - .2 provide parts list for foot grille and frame and hardware
  - .2 Brief York University maintenance staff regarding proper care, cleaning, and general maintenance.
- 1.8 Quality Assurance
  - .1 Foot Grilles for new construction or a renovation project shall be obtained from a single manufacturer
  - .2 Provide and install foot grilles that comply with “Common Access and Circulation” section of the Draft Initial Proposed Accessible Built Environment Standard (January 2009)
- 1.9 Standard Warranties and Extended Warranties (S.W. / E.W.)
  - .1 Provide warranty in writing on both product and installation for a period of twenty (20) years from the date of system acceptance

## 2.0 PRODUCTS

### 2.1 Foot Grille, Frame, Pan and Drain

- .1 Shall be anti-slippery model
- .2 Shall be constructed from extruded alloy 6061-T6, or 6063-T5 aluminum or stainless steel alloy 304 or 316L, in a natural mill finish, argon welded (for aluminum)
- .3 Deflection under live load: the foot grille shall be capable to accept a minimum load of 1760 Newton applied over a 100mm square surface in order to obtain 1/180" deflection over a 4'00" (1220mm) span
- .4 the foot grille's perimeter frames shall be of inverted "T", "L" or "W" shape, in order to anchor the structure into concrete. For sections larger than 1828mm X 2438mm (6' X 8') a mechanical joint shall be provided.
- .5 Blades shall be "T" shaped, spacing between blades not to exceed 3.175mm (1/8") with an overall depth of 50mm (2") from finished floor.
- .6 Spacing between blades and retaining rods shall be so as to meet manufacturer's specifications for the minimum weight capacity. Foot grille shall be manufactured in sections so as to increase ease of maintenance
- .7 Foot grille shall be equipped with pans
- .8 Foot grille pans shall be constructed of 0.794mm (22 gauge) stainless steel, or 0.794mm (22 gauge) galvanized steel
- .9 Foot grille pan installations shall incorporate a stainless steel drain
- .10 Foot grille pan shall incorporate a 75 mm stainless steel sieve, which shall be installed at the bottom of the pan
- .11 Length and connection of Foot Grille Pan drain pipe shall be coordinated with York University Maintenance Department
- .12 A P-trap shall be installed to be located so as to be accessible for maintenance
- .13 P-trap shall have trap seal primer
- .14 Connect a water supply drain to trap seal so as to allow for a continuous flow through the drain
- .15 Two (2) coats of bituminous paint on concrete slabs under pan and pipe are required
- .16 All frame, pan and foot grille components that are designed to come into contact with masonry shall be waterproofed with two coats of bituminous paint
- .17 All components shall comply with ASTM B117 and shall be able to sustain 1000 hours salt fog without notable changes
- .18 All aluminum components shall comply with ASTM B221 and or ASTM B209

### 3.0 EXECUTION

#### 3.1 Coordination

- .1 Coordinate the installation of foot grilles with York University's Project Manager, CSBO's Maintenance Department, and CSBO 's Custodial Services

#### 3.2 Installation

- .1 Install foot grille, frames, pans and other components to comply with manufacturer's written instructions at locations indicated and with top of foot grilles and frames in relationship to one another and to adjoining finished flooring as recommended by manufacturer.
- .2 Install foot grille, square and level with finished floor so as to permit easy manipulation of all sections.
- .3 Frame members and intermediary supports are to be level and well supported on all their lengths in order to avoid any long term deflection over the long period
- .4 Frames and pans are to be thoroughly cleaned before installing any grille section in order for them not to exceed finished floor level.
- .5 Sound gaskets damaged during installation are to be replaced before final inspection
- .6 Protect grilles from construction traffic with a temporary filler of plywood or fiberboard to be installed in the foot grille recesses and cover frames with plywood protective flooring. Maintain this protection until construction traffic has ended and Project is near Substantial Completion.
- .7 Verify that latches are in closed position, and properly greased
- .8 Apply Two (2) coats of waterproofing bituminous paint shall be applied to the concrete base to avoid water infiltration
- .9 Foot Grilles shall not be installed on sand coat. Foot Grilles shall be installed on leveled concrete

**End of Section**